

INCH-POUND

MS27783F

4 May 2024

SUPERSEDING

MS27783E

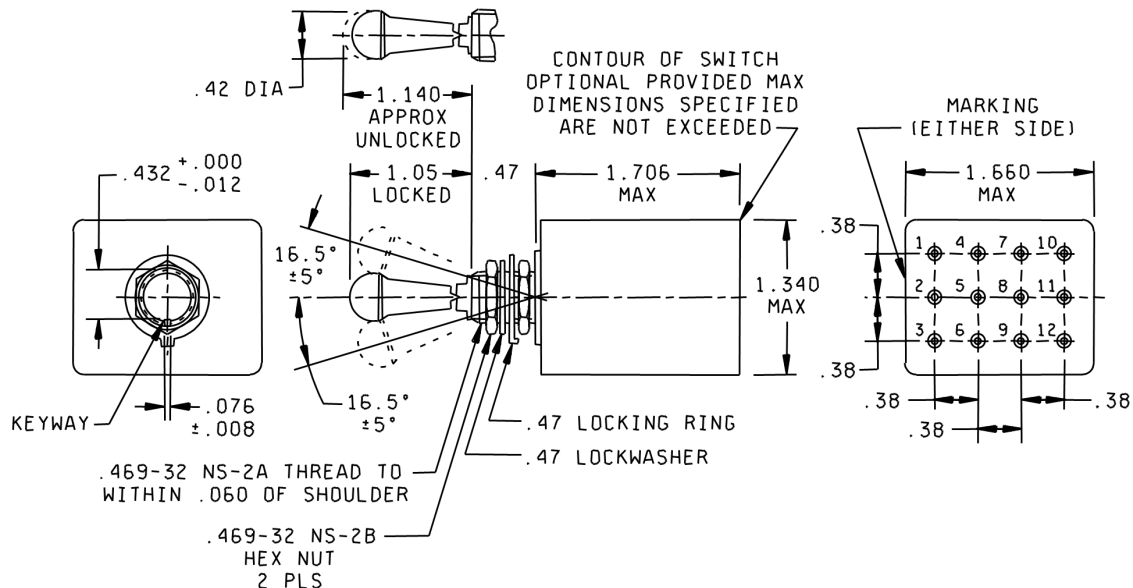
24 November 2021

DETAIL SPECIFICATION SHEET

SWITCH, TOGGLE, FOUR POLE, ENVIRONMENTALLY SEALED, LEVER LOCK, INTEGRATED WIRE TERMINALS

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the switch described herein shall consist of this specification and the latest issue of [MIL-DTL-3950](#).



NOTES:

1. Dimensions are inches.
2. Unless otherwise specified, tolerance is $\pm .020$ for two place decimals and $\pm .005$ for three place decimals.
3. For hardware detail specifications see appendix of [MIL-DTL-3950](#).
4. Contact installing/ removal tool in accordance with M81969/14-03 per [SAE-AS81969/14](#).
5. Grommet sealing plug, in accordance with MS27488-16-2 per [MS27488](#).
6. Terminal shall adequately accept a wire contact within dimensional limits of M39029/1-102 per [SAE-AS39029/1](#).
7. Part number example: MS27783-21A (locking combination 'A').
8. In the event of a conflict between the text of this standard and the reference cited herein, the text of this standard shall take precedence.

FIGURE1. Dimensions and configuration

AMSC N/A

DISTRIBUTION STATEMENT A. Approved for public release. Distribution is unlimited.

FSC 5930



REQUIREMENTS

Sealing plugs may be used in nonfunctional grommet holes.

Sealing grommet shall seal on a smooth wore insulation of .068 to 0.103 diameters

The terminal end of switch shall be color coded blue to indicate contact size

Direction of internal mechanism movement is opposite to the direction of the toggle movement

Maximum weight is .227 pound.

The locking means at the top of the toggle bushing shall be capable of withstanding a torque of 20 inch-pounds applied in both directions immediately following the humidity test.

Locking arrangement Positive locking shall be accomplished and shall prevent motion of the toggle lever until the locking mechanism shall be 3 to 5 pounds

Direction of internal mechanism movement is opposite to the direction of the toggle movement.

Electrical rating: See table I.

LOCKING COMBINATIONS

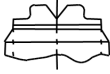
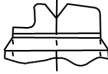
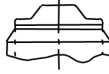
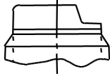
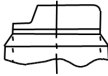
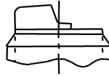
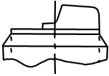
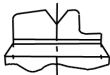
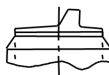
A  LOCKED IN THREE POSITIONS	B  LOCKED IN CENTER AND DOWN POSITIONS (KEYING SIDE)	D  LOCKED OUT OF CENTER POSITION	E  LOCKED IN CENTER POSITION
F  LOCKED IN UP POSITION (OPPOSITE KEYING)	G  LOCKED IN DOWN POSITION (KEYING SIDE)	H  LOCKED OUT OF CENTER AND DOWN POSITION (KEYING SIDE)	J  LOCKED OUT OF CENTER AND UP POSITION (OPPOSITE KEYING)
K  LOCKED IN CENTER AND UP POSITION (OPPOSITE KEYING)	L  LOCKED OUT OF DOWN POSITION (KEYING SIDE)	M  LOCKED OUT OF AND INTO UP POSITION (OPPOSITE KEYING)	N  LOCKED OUT OF UP POSITION (OPPOSITE KEYING)
	P  LOCKED OUT OF AND INTO DOWN POSITION (KEYING SIDE)	FIGURES A THRU P DO NOT REPRESENT DETAILS OF CONSTRUCTION. THEY SCHEMATICALLY ILLUSTRATE LOCKING CONFIGURATIONS AND MOMENTARY POSITIONS	

FIGURE 2 Locking Combinations.

MS27783F

TABLE I Detail Requirements

MS Part number	Available locking combinations	Circuit with toggle lever in			Current capacity (amperes) 28 volts dc			Current capacity (amperes) 115 volts, 60 and 400 hertz ac		
		Keying side	Center	Opposite keying side	Lamp-load circuit	Resistive circuit	Inductive circuit	Lamp-load circuit	Resistive circuit	Inductive circuit
MS27783-1	ALL	1-2 4-5 7-8 ON 10-11	2-3 4-5 7-8 ON 11-12	2-3 5-6 8-9 ON 11-12	5	20	12	4	15	15
MS27783-2	E,F,K,L,M,N	1-2 MOM 4-5 7-8 ON 10-11	2-3 4-5 7-8 ON 11-12	2-3 5-6 8-9 ON 11-12	4	18	10	2	11	8
MS27783-3	E,L,N	1-2 MOM 4-5 7-8 ON 10-11	2-3 4-5 7-8 ON 11-12	2-3 MOM 5-6 8-9 ON 11-12						
MS27783-21	ALL	1-2 7-8 4-5 ON 10-11	OFF	2-3 8-9 5-6 ON 11-12	5	20	12	4	15	15
MS27783-22	D,F,G	OFF	NONE	2-3 8-9 5-6 ON 11-12						
MS27783-23	D,F,G	1-2 7-8 4-5 ON 10-11	NONE	2-3 8-9 5-6 ON 11-12						
MS27783-24	E,F,K,M	NONE	OFF	2-3 8-9 5-6 ON 11-12						
MS27783-25	F	NONE	MOM. OFF	2-3 8-9 5-6 ON 11-12	4	18	10	2	11	8
MS27783-26	F	1-2 MOM 7-8 4-5 ON 10-11	NONE	2-3 8-9 5-6 ON 11-12						
MS27783-27	E,L,N	1-2 MOM 7-8 4-5 ON 10-11	OFF	2-3 MOM 8-9 5-6 ON 11-12						
MS27783-28	E	1-2 MOM 7-8 4-5 ON 10-11	OFF	NONE						
MS27783-29	F	MOM OFF	NONE	2-3 8-9 5-6 ON 11-12						
MS27783-30	F	1-2 MOM 7-8 4-5 ON 10-11	NONE	OFF						
MS27783-31	E,F,K,L,M,N	1-2 MOM 7-8 4-5 ON 10-11	OFF	2-3 8-9 5-6 ON 11-12						
MS27783-32	E	NONE	1-2 7-8 4-5 ON 10-11	2-3 MOM 8-9 5-6 ON 11-12						
MS27783-33	E,F,K,M	NONE	1-2 7-8 4-5 ON 10-11	2-3 8-9 5-6 ON 11-12	5	20	12	4	15	15

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Test Requirements

Test shall be performed in accordance with [MIL-DTL-3950](#) except

- a) During all tests. Switches shall be fully wired with appropriate wire and terminal contacts.
- b) Contact voltage drop- the contact drop with two terminals and the switch contact in series shall not exceed 8 millivolts measured from one wire contact through the contacts to the other wire contacts.

Referenced documents

[MIL-DTL-3950](#) [MS27488](#)
[SAE-AS39029/1](#) [SAE-AS81969/14](#)

Changes from previous issue: The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the previous issue.

Custodians:

Army – CR
Navy – AS
Air Force – 85
DLA – CC

Preparing activity
DLA – CC

(Project 5930-2024-021)

Review activities

Army – AR, AV, MI
Navy – EC, MC

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil/>.